Paper Code Number: 4181	2017 (A)	Roll No.________________

INTERMEDIATE PART-II (12th CLASS)

STATISTICS PAPER-II (NEW SCHEME) (SESSION 2015-2017)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) In a Normal Distribution, δ is always:-
(A) Negative number (B) Zero (C) Positive number (D) Odd number

(2) If $y = 5x + 10$ and X is $N(10, 25)$, then mean of Y is:-
(A) 50 (B) 60 (C) 70 (D) 135

(3) Standard normal probability density function is denoted by:-
(A) $F(X)$ (B) $\mu(X)$ (C) Z (D) $\phi(Z)$

(4) Population size is denoted by:-
(A) M (B) N (C) n (D) m

(5) If $\sum x = 18$, $N = 3$, then μ is:-
(A) 6 (B) 9 (C) 3 (D) 10

(6) The collection of detailed information is known as:-
(A) Units (B) Designs (C) Inaccuracies (D) Census

(7) A point estimator is a sample:-
(A) Estimate (B) Value (C) Parameter (D) Statistic

(8) Type – II error is denoted by:-
(A) $\propto$ (B) β (C) $1-\beta$ (D) $1-\propto$

(9) A sample of size n is called a small sample if n is:-
(A) < 30 (B) ≥ 30 (C) $= 30$ (D) ≤ 30

(10) Independent variable is also called:-
(A) Regressor (B) Regressand (C) Predictand (D) Explained

(11) When two variables are uncorrelated the value of 'r' is:-
(A) -1 (B) 0 (C) $+1$ (D) $+2$

(12) If $\sum y = 96$, $n = 8$, if $b = 0$ then 'a' is:-
(A) 10 (B) 11 (C) 12 (D) 13

(13) In attributes, "Negative class Frequency" can never be:-
(A) Ultimate (B) Positive (C) Negative (D) Consistence

(14) The two attributes are independent, if:-
(A) $Q = -1$ (B) $Q = 1$ (C) $Q = 0$ (D) $Q = 2$

(15) Seasonal variations are short term:-
(A) Analysis (B) Indicators (C) Components (D) Movements

(16) For best fitted line $\sum(y - \hat{y})^2$ is:-
(A) Maximum (B) Minimum (C) Zero (D) None of these

(17) The unit of frequency is:-
(A) Newton (B) Joule (C) Hertz (D) Second

Paper Code Number: 4181	2018 (A)	Roll No.__________

INTERMEDIATE PART-II (12th CLASS)

STATISTICS PAPER-II (NEW SCHEME)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) In a normal distribution, $P(-\infty < x < +\infty)$ is equal to:-
(A) 1 (B) 0 (C) -1 (D) -2

(2) In a normal distribution, M.D(x) is equal to:-
(A) $.8989\sigma$ (B) $.7979\sigma$ (C) $.6969\sigma$ (D) $.5959\sigma$

(3) In a normal distribution if mean = 50, then the value of Median is:-
(A) 50 (B) 40 (C) 30 (D) 60

(4) A sample is a part of the:-
(A) Sampling (B) Population (C) Unit (D) None of these

(5) Any value calculated from sample data is called:-
(A) Error (B) μ (C) Statistic (D) Bias

(6) The complete list of all the sampling units are called:-
(A) Sampling frame (B) Sample design (C) Sampled population (D) Target population

(7) A point estimation is used to estimate the unknown true value of population:-
(A) Data (B) Parameter (C) Estimation (D) Estimate

(8) The probability of type – II error is denoted by:-
(A) α (B) β (C) $1-\beta$ (D) $1-\alpha$

(9) If $n < 30$ and σ unknown we use:-
(A) F – test (B) Z – test (C) t – test (D) Chi – square test

(10) The dependence of one variable upon other is called:-
(A) Regression (B) Correlation (C) Covariance (D) None of these

(11) In regression equation $\hat{y} = a + bx$, $\Sigma(y - \hat{y}) =$ ________
(A) -1 (B) 0 (C) 1 (D) 2

(12) The value of correlation coefficient r lies between:-
(A) -1 and 0 (B) -1 and $+1$ (C) 0 and $+1$ (D) -2 and $+2$

(13) The two attributes are independent if:-
(A) $Q=-1$ (B) $Q=1$ (C) $Q=2$ (D) $Q=0$

(14) Qualitative variable is also called:-
(A) Frequency (B) Attribute (C) Class (D) None of these

(15) Systematic component of variation in a time series is called:-
(A) Component (B) Noise (C) Signal (D) Series

(16) Fire in a factory is an example of:-
(A) Secular trend (B) Cyclical variation (C) Seasonal variation (D) Irregular variation

(17) The number of instructions processed in one second is called:-
(A) Data (B) Storage (C) Accuracy (D) Speed

Paper Code Number: 8181 | 2018 (A) | Roll No.________________

INTERMEDIATE PART-II (12th CLASS)

STATISTICS PAPER-II (OLD SCHEME)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) $X \sim N(50, 49)$, if $Y = X - 7$, then standard deviation of Y is:-
(A) 7 (B) 14 (C) 0 (D) 49

(2) The mean and standard deviation of the standard normal distribution are respectively:-
(A) 1 and 0 (B) 0 and 1 (C) μ and σ^2 (D) None

(3) In a normal curve $\mu \pm \sigma$ covers:-
(A) 50 % area (B) 68.27 % area (C) 95.45 % area (D) 99.73 % area

(4) A value calculated from population data is called:-
(A) Statistic (B) Parameter (C) Standard error (D) None

(5) Standard error of mean is the standard deviation of:-
(A) Sample (B) Population (C) Sampling distribution of mean (D) None

(6) A border patrol check point that stops every passenger van is:-
(A) Simple random sampling (B) Systematic sampling (C) Complete enumeration (D) None

(7) Level of significance is denoted by:-
(A) β (B) $(1-\beta)$ (C) α (D) $(1-\alpha)$

(8) A hypothesis that does not specifies all values of the parameters is called:-
(A) Simple hypothesis (B) Composite hypothesis (C) Statistical hypothesis (D) None

(9) A rule or formula that provides a basis for testing a null hypothesis is called:-
(A) Population statistic (B) Test statistic (C) Level of significance (D) None

(10) In the regression equation $\hat{y} = a + bx$, y is called:-
(A) Independent variable (B) Dependent variable (C) Y – intercept (D) None

(11) b_{yx} and b_{xy} always have:-
(A) Same signs (B) Opposite signs (C) No signs (D) None

(12) In the regression equation $\hat{x} = c + dy$, c is called:-
(A) Y – intercept (B) X – intercept (C) Independent variable (D) Dependent variable

(13) If $(AB) < \frac{(A)(B)}{n}$, the association between two attributes A and B is:-
(A) Negative (B) Positive (C) Zero (D) None

(14) The coefficient of association lies between:-
(A) 0 to 1 (B) $-\infty$ to ∞ (C) -1 to $+1$ (D) -1 to 0

(15) The graph of time series is called:-
(A) Historigram (B) Histogram (C) Ogive (D) Pie diagram

(16) Increase in the number of patients in a hospital due to heat stroke is:-
(A) Secular trend (B) Seasonal variation (C) Cyclical variation (D) Irregular variation

(17) One byte equals:-
(A) 8 bits (B) 4 bits (C) 6 bits (D) 12 bits

Paper Code Number: 4181	2019 (A)	Roll No.________________

INTERMEDIATE PART-II (12th CLASS)

STATISTICS PAPER-II (NEW SCHEME)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The whole area under the normal curve is:
(A) Zero (B) 0.50 (C) One (D) 0.75

(2) In normal distribution if $\mu = 20$ and $\sigma^2 = 36$ then median is equal to:
(A) 20 (B) 36 (C) 6 (D) 40

(3) The variance of standard normal distribution is:
(A) Zero (B) One (C) 100 (D) ∞

(4) If $E(\overline{X}) = 12$, then the value of population mean is:
(A) $\frac{1}{12}$ (B) 24 (C) 12 (D) 144

(5) The possible samples in sampling with replacement are taken by:
(A) N^n (B) n^N (C) ${}^N C_{n-1}$ (D) ${}^N P_n$

(6) Sampling error can be reduced by: (A) Non sampling error
(B) Increasing the sample size (C) Decreasing the sample size (D) Increasing the population

(7) Level of confidence is denoted by:
(A) $1 - \alpha$ (B) α (C) $1 - \beta$ (D) β

(8) t-distribution has ______ degree of freedom.
(A) n (B) $n-2$ (C) $n-3$ (D) $n-1$

(9) If H_o is true and we reject H_o, it is called:
(A) Sampling error (B) Standard error (C) Type – II error (D) Type – I error

(10) If one regression co-efficient is –ve then the other regression co-efficient will be:
(A) +ve (B) –ve (C) 0 (D) 1

(11) The regression equation always passes through:
(A) (X, Y) (B) (a, b) (C) $(\overline{X}, \overline{Y})$ (D) $(0, 0)$

(12) If $b_{yx} = r_{xy}$, then which one is true?
(A) $b_{xy} = b_{yx}$ (B) $b_{xy} = r_{yx}$ (C) $b_{xy} = r_{xy}$ (D) All of these

(13) The attributes A and B are called independent when:
(A) $Q = 0$ (B) $r = 0$ (C) $Q = 1$ (D) $r = 1$

(14) Spearman's co-efficient of rank correlation always lies between:
(A) 0 and 1 (B) -1 and $+1$ (C) $-\infty$ and $+\infty$ (D) 0 and $+\infty$

(15) For a least squares linear trend $\hat{Y} = a + bX$, the b is the:
(A) Variable (B) Intercept (C) Slope (D) Trend value

(16) Damage to the crops due to flood is:
(A) Secular trend (B) Seasonal variation (C) Irregular movement (D) Cyclical variation

(17) One byte is equal to:
(A) 8 bits (B) 4 bits (C) 6 bits (D) 12 bits

Paper Code Number: 8181

2019 (A) Roll No.______________

INTERMEDIATE PART-II (12th CLASS)

STATISTICS PAPER-II (OLD SCHEME)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The number of parameters of Normal distribution is:
(A) Four (B) Three (C) Two (D) One

(2) In Normal distribution if $\mu = 10$ then mode is:
(A) 100 (B) 10 (C) 5 (D) Zero

(3) Total area under the normal curve is:
(A) 1 (B) < 1 (C) > 1 (D) None

(4) Population parameters are denoted by:
(A) Roman letters (B) Greek letters (C) Latin letters (D) English letters

(5) The mean of sampling distribution of means is denoted by:
(A) $\overline{X}$ (B) P (C) S^2 (D) $\mu_{\overline{X}}$

(6) In sampling without replacement, a sampling unit can be selected:
(A) Twice (B) Once (C) < 1 (D) > 1

(7) The point estimator of μ is:
(A) $\hat{X}$ (B) X (C) $\tilde{X}$ (D) $\overline{X}$

(8) The probability of type I error is:
(A) α (B) β (C) $1-\alpha$ (D) None of these

(9) Critical region is a region of:
(A) Rejection (B) Acceptance (C) Indecision (D) None

(10) The term regression was used by:
(A) Newton (B) Fisher (C) Galton (D) Pearson

(11) A perfect Negative correlation is represented by:
(A) 1 (B) Zero (C) Zero and one (D) -1

(12) If $r_{xy} = 0.8$ than r_{yx} is:
(A) 0.8 (B) 0.6 (C) 0.4 (D) 0.1

(13) For 3×4 contingency table, the degree of freedom will be:
(A) 12 (B) 6 (C) 4 (D) 3

(14) The eye colour of 100 men is:
(A) Attribute (B) Variable (C) All of these (D) None of these

(15) Fire in a factory is an example of:
(A) Secular trend (B) Seasonal variation (C) Cyclical variation (D) Irregular variation

(16) In semi average method, we divide the data into:
(A) 4 parts (B) 2 parts (C) 8 parts (D) None

(17) The most common input devices are:
(A) Monitor and printer (B) Mouse and monitor (C) Keyboard and mouse (D) None of these

Paper Code
Number: 4181

2020

Roll No.__________

INTERMEDIATE PART-II (12th CLASS) (SPECIAL EXAMINATION)

STATISTICS PAPER-II

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) In a normal distribution, the value of β_1 and β_2 are respectively:
(A) 0 & 3 (B) 3 & 0 (C) 0 & 1 (D) 1 & 3

(2) The normal curve is called:
(A) Leptokurtic (B) Platykurtic (C) Mesokurtic (D) Skewed

(3) The number of parameters in a normal distribution are:
(A) Five (B) Two (C) Three (D) Four

(4) A value calculated from the sample data is called:
(A) Parameter (B) Statistic (C) Mean (D) Proportion

(5) The possible samples in without replacement sampling are:
(A) $N-n$ (B) $N+n$ (C) ${}^N C_n$ (D) N^n

(6) Standard error of the mean is the standard deviation of the:
(A) Population (B) Sample (C) Sampling distribution of means (D) None of these

(7) If $E(\hat{\theta}) = \theta$, then $\hat{\theta}$ is:
(A) Biased (B) Unbiased (C) Positively (D) None of these

(8) Confidence coefficient or level of confidence is denoted by:
(A) $1-\beta$ (B) $1-\alpha$ (C) α (D) β

(9) Two tailed test is used if:
(A) $H_1 : \mu < \mu_0$ (B) $H_1 : \mu > \mu_0$ (C) $H_1 : \mu \neq \mu_0$ (D) None of these

(10) The sum of squares of residuals is denoted by:
(A) e (B) Σe (C) Σe^2 (D) $\frac{\Sigma e^2}{n}$

(11) If $y = 10 - 2x$, then the slope of line is:
(A) 10 (B) 2 (C) -2 (D) Unknown

(12) If both regression coefficients are negative, then the correlation coefficients will be:
(A) Negative (B) Positive (C) Zero (D) One

(13) If two attributes A and B are independent, then the coefficient of association is:
(A) -1 (B) $+1$ (C) 0 (D) 0.5

(14) Chi-square curve ranges from:
(A) $-\infty$ to $+\infty$ (B) 0 to ∞ (C) $-\infty$ to 0 (D) 0 to 1

(15) The graph of a time series is called a:
(A) Histogram (B) Trend line (C) Historigram (D) Scatter diagram

(16) Fire in a factory is an example of:
(A) Secular Trend (B) Cyclical Variation (C) Seasonal Variation (D) Irregular Variation

(17) The most common input device/s is/are:
(A) Keyboard and mouse (B) Software (C) Monitor (D) Printer

Paper Code Number: 4181

2021 (A) Roll No.______ 12

INTERMEDIATE PART-II (12th CLASS)

STATISTICS PAPER-II

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

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Q.No.1

(1) In standard normal distribution, mean is:
(A) 0 (B) 1 (C) 2 (D) 3

(2) Normal distribution is:
(A) Bi-modal (B) Tri-modal (C) Multi-modal (D) Uni-modal

(3) In normal distribution, the area above the third quartile is:
(A) 75% (B) 30% (C) 25% (D) 70%

(4) Complete list of sampling units is called:
(A) Sampling frame (B) Sample design (C) Sampled population (D) Target population

(5) If sampling is done with replacement, then total number of possible samples are:
(A) ${}^{N}C_{n}$ (B) ${}^{N}P_{n}$ (C) n^{N} (D) N^{n}

(6) Probability distribution of any statistic is called:
(A) Sampling distribution (B) Population distribution
(C) Frequency distribution (D) Sample distribution

(7) A specific value calculated from sample is called:
(A) Estimator (B) Estimate (C) Estimation (D) Bias

(8) If $E(\hat{\theta}) = \theta$ then estimator $\hat{\theta}$ is said to be _______ for parameter θ.
(A) Biased (B) Unbiased (C) Consistent (D) Efficient

(9) Rejecting H_0 when H_0 is true is called:
(A) No error (B) Type II error (C) Type I error (D) α

(10) Which of the followings is a simple hypothesis? if $\theta_0 = 15$
(A) $\theta < \theta_0$ (B) $\theta > \theta_0$ (C) $\theta \neq \theta_0$ (D) $\theta = \theta_0$

(11) If $\Sigma y = 96$ and $n = 8$, if $b = 0$ then value of "a" is:
(A) 10 (B) 11 (C) 12 (D) 13

(12) The independent variable is also called:
(A) Regressor (B) Regressand (C) Predictand (D) Explained

(13) The value of coefficient of correlation lies between:
(A) -1 and 0 (B) -1 and $+1$ (C) 0 and $+1$ (D) -2 and $+1$

(14) The value of χ^2 statistic is always:
(A) Zero (B) Less than zero (C) Unity (D) Positive

(15) The characteristic which varies in quality from one individual to another is called:
(A) Variable (B) Attribute (C) Statistic (D) Parameter

(16) The systematic component of time series which follows regular pattern of variation is called:
(A) Signal (B) Noise (C) Error (D) Model

(17) Decomposition of time series is called:
(A) De-trending (B) Noise (C) Analysis of time series (D) None

Paper Code Number: 8181

2017 (A) Roll No._______________

INTERMEDIATE PART-II (12^{th} CLASS)

STATISTICS PAPER-II (OLD SCHEME) (SESSION 2012-2014)

TIME ALLOWED: 20 Minutes **OBJECTIVE** MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The value of "e" is approximately equal to:-

(A) 2.7183 (B) 2.6183 (C) 2.8173 (D) 3.1416

(2) Total area under the curve is:-

(A) 1 (B) < 1 (C) > 1 (D) None of these

(3) In a normal distribution $E(x-\mu)^2$ is:-

(A) Quartile deviation (B) Standard deviation (C) Variance (D) None of these

(4) Sample is a subset of:-

(A) Population (B) Data (C) Set (D) Distribution

(5) The finite population correction factor is:-

(A) $\frac{n}{N}$ (B) $\frac{N}{n}$ (C) $\frac{N-n}{N-1}$ (D) $\sqrt{\frac{N-n}{N-1}}$

(6) Probability distribution of a statistic is called:-

(A) Sampling distribution (B) Standard error (C) Sampling error (D) Parameter

(7) A large sample contains more than:-

(A) 5 values (B) 10 values (C) 20 values (D) 30 values

(8) Power of test is denoted by:-

(A) α (B) β (C) $1-\alpha$ (D) $1-\beta$

(9) The probability of type – I error is called:-

(A) α (B) $1-\alpha$ (C) β (D) $1-\beta$

(10) Simple linear regression model contains:-

(A) One variable (B) Two variables (C) Three variables (D) None of these

(11) If $r_{xy} = -0.84$ then r_{yx} is:-

(A) -0.84 (B) 0.84 (C) 0.42 (D) None of these

(12) Strength of linear relationship between variables is called:-

(A) Regression (B) Causation (C) Correlation (D) Association

(13) The parameters Chi Square distribution is:-

(A) Degree freedom (B) Number of rows (C) Number of columns (D) None of these

(14) If $(AB) > \frac{(A)(B)}{n}$ then association is:-

(A) Positive (B) Negative (C) Perfect (D) None of these

(15) Methods of secular trend are:-

(A) 2 (B) 3 (C) 4 (D) 5

(16) The graph of time series is called:-

(A) Histogram (B) Historigram (C) Trend (D) Straight line

(17) Display on the computer screen is:-

(A) Soft copy (B) Hard copy (C) Computer copy (D) None of these